

CLAIMS

1. An electron beam emitting apparatus comprising  
a first plate in which an electron-emitting device is  
provided, and an electrode opposed to the first plate,  
5 the electrode being applied a potential to accelerate  
electrons emitted from said electron-emitting device,

wherein a potential defining region is provided on  
a said-electrode-side surface of said first plate and a  
first potential defining region forming said potential  
10 defining region is provided within a projective area of  
said electrode onto said potential defining region and  
wherein, where  $d$  is a distance between said electrode  
and said potential defining region and a marginal area  
to be potential-defined is defined within a range of  
15  $0.83d$  in all directions parallel to said first plate  
from the edge of the projective area of said electrode  
onto said potential defining region, an additional  
potential defining region is provided in almost all the  
marginal area to be potential-defined.

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2. The electron beam emitting apparatus according  
to Claim 1, wherein, where a marginal area to be  
potential-defined is defined within a range of  $d$  in all  
the directions parallel to said first plate from the  
25 edge of the projective area of said electrode onto said  
potential defining region, said additional potential  
defining region is provided in almost all the marginal

area to be potential-defined.

3. The electron beam emitting apparatus according to Claim 1 or 2, wherein said electrode is provided on  
5 a second plate opposed to said first plate and said electrode is provided in a range extended by at least a distance  $2\alpha d$  (where  $\alpha$  is a number not less than 0.6 and not more than 1) in all directions parallel to said  
10 second plate from the edge of an irradiated area which electrons emitted from said electron-emitting device irradiate.

4. The electron beam emitting apparatus according to any one of Claims 1 to 3, wherein at least part of  
15 said potential defining region is comprised of an electroconductive plate placed between said first plate and said electrode.

5. The electron beam emitting apparatus according to any one of Claims 1 to 4, wherein said electron beam  
20 emitting apparatus comprises a plurality of said electron-emitting devices.

6. The electron beam emitting apparatus according to Claim 5, wherein said plurality of electron-emitting  
25 devices are arranged in a matrix pattern.

7. The electron beam emitting apparatus according to any one of Claims 1 to 6, wherein said electron-emitting device is a cold-cathode emission device.

5           8. An image-forming apparatus comprising the electron beam emitting apparatus as set forth in any one of Claims 1 to 7, and a fluorescent body, which emits light under irradiation with electrons emitted from the electron-emitting device of the electron beam  
10 emitting apparatus.